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How to cite:

Walker, Colin C. (2018). *Aloe littoralis* - a review of this widespread African species. *Haworthiad*, 32(3) pp. 60–64.

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Aloe littoralis – a review of this widespread African species

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The history and natural distribution of *Aloe littoralis* are discussed and the species is described both in habitat (principally in Namibia) and in cultivation. Notes on its flowering, conservation status, common names and appearance in a Coat of Arms are also included.

History and distribution

Aloe littoralis was discovered by Friedrich Welwitsch in Angola in 1854. Welwitsch arrived in Luanda, the capital, on September 29th 1853 and spent 7 years travelling through the present-day provinces of Luanda, Bengo, Cuanza Norte, Malange, Benguela, Namib and Huíla (Hiern & Rendle, 1896–1901). His time was exceptionally well spent for he collected in excess of 10,000 plant specimens representing around 5,000 species (Albuquerque *et al.*, 2009). He also collected other natural history specimens, notably animals. Since he was the first European botanist to visit Angola, many of his collections represented new species, around 1,000 having been described so far. Only a relatively few of these were described by Welwitsch himself, but many were named on his behalf after his death in London on October 20th 1872, notably in the 6 volume work by Hiern & Rendle (1896–1901). Some of these plants commemorate Welwitsch, the most famous and iconic of all being the exceptionally unusual *Welwitschia mirabilis* that he discovered in 1860. Hiern & Rendle wrote that “The sensations of the enthusiastic discoverer, when he first realised the extraordinary character of the plant he had found were, as he has said, so overwhelming that he could do nothing but kneel down on the burning

soil and gaze at it, half in fear lest a touch should prove it a figment of the imagination.”! Thus, this notable African explorer and botanist is justifiably commemorated by this remarkable discovery.

Welwitsch's Angolan aloes are obviously far less exceptional than his namesake *Welwitschia*, but he was the first botanist to collect aloes in Angola. Baker (1878) named six new Angolan aloes based entirely on Welwitsch collections: *Aloe andongensis* Baker, *A. angolensis* Baker, *A. littoralis* Baker, *A. palmiformis* Baker, *A. platyphylla* Baker and *A. zebrina* Baker. Of these five are still recognised as distinct with *A. platyphylla* considered to be synonymous with *A. zebrina* (Carter *et al.*, 2011). Klopper *et al.* (2009) accepted 26 species for *Aloe* in Angola. To this Van Jaarsveld (2012) added *Aloe mocamedensis* as a new species. So out of the currently recognised total of 27 species for this country, Welwitsch had discovered a significant 19%.

Aloe littoralis is now known to have an extensive natural distribution. Hiern & Rendle (1896–1901) described this species as “Arborescent, trunk 6 to 10 ft., not often higher, as thick as the arm or, more rarely, the thigh.” In terms of its distribution they go on to say that, based on Welwitsch's field notes, this species is “Very plentiful on dry hills with a sandy clayey soil, in the whole littoral region of Loanda [now Luanda], diminishing in the higher parts and absent in the rocky woody region... In flower May to July 1854.” Baker (1878) had earlier named this species *littoralis* because of its association with the coast. It is, however, now known to be a very widespread species growing throughout Angola (Klopper *et al.*, 2009) where

its habitat is given as “rocky outcrops in mixed open woodland and grassland. Also, on calcrete or sand. Summer rain and very dry, warm to cool summers.”

Further afield this species is recorded from Namibia, Zambia, Botswana, Zimbabwe, northern South Africa and eastwards into southern Mozambique (Reynolds, 1966; Carter *et al.*, 2011). Over much of this range (Namibia, Botswana and South Africa) the species was formerly known as *Aloe rubrolutea* Schinz (Prain, 1909; Van der Merwe, 1941; Reynolds, 1950), another species based initially on a collection made in what was then South West Africa. However, Reynolds (1966) reassessed these species and merged *A. rubrolutea* with *A. littoralis*. Another synonym accumulated along the way is *Aloe schinzii* Baker from Botswana,

but this name has hardly ever been used.

Carter (2001) recorded that “Populations from the open pans in northern Botswana tend to produce acaulescent [stemless] plants.”

In Zimbabwe *A. littoralis* has a scattered distribution with an altitudinal range of 600 to 1,200 m (West, 1992).

The other Welwitsch discovered species, *A. zebrina*, has a similar but even wider distribution compared to *A. littoralis* since it additionally occurs in Malawi (Lane, 2004).

***Aloe littoralis* in Namibia**

In July 2013 my Open University colleague and friend Janet Haresnape was working and holidaying in Namibia. Following her usual practice Janet photographed any aloes she found on my behalf. At Oanob Lake near Rehoboth, south of the capital city of Windhoek, Namibia Janet photographed what I have since identified as *A. littoralis* (Figs. 1 & 2). This specimen illustrated is typical for the



Fig. 1. *Aloe littoralis* after flowering at Oanob Lake near Rehoboth, Namibia, July 1st, 2013. Photo: Janet Haresnape.



Fig. 2. Closer view of a rosette of *A. littoralis*. Photo: Janet Haresnape.

species, having a single erect unbranched stem about 2 m tall clothed with the persistent dead leaves. It is, though, recorded as growing up to 3 m tall being typically unbranched and hence simple (Van Wyk & Smith, 2014). The leaves are pale greyish green with a strong reddish tinge in dry conditions, forming a dense rosette.

The leaves are unspotted and have prominent brown stout teeth on the margins (Fig. 2). Since this was July the plant had long since finished flowering, but the dried flower spike remained (Fig. 1) up to about 1 m tall, well branched with 15 racemes. However, there were also some ripe seed capsules.

In Namibia this species does not have a littoral (coastal) distribution and only approaches but never reaches the coast in the very north of the country, since most of its distribution is in central Namibia. Rothmann (2004) records it as occurring in vast numbers and in big colonies. Flowering in central Namibia occurs in December to February,

so Janet visited this location well after the flowering season. Further Rothmann reports that flowering varies across the country and occurs in the south in the summer (October) whereas in the north flowering is as late as March–April.

***Aloe littoralis* in cultivation**

Janet was able to collect a small sample of seed from which a few seedlings were subsequently raised by another friend, Tina Wardhaugh (Fig. 3). The seedlings are robust, grow easily and as of September 2018 are just over four years old. Interestingly they all have heavily-spotted leaves with elongated pale spots. This feature of spotted juvenile leaves but unspotted mature leaves is not unique to this species as it has been observed in several other species, for example in *A. tomentosa* (Walker, 2016). Perhaps this spotted-leaved feature is related to camouflage of the juveniles to discourage herbivores from feeding on them?



Fig. 3. Four year old seedlings of *A. littoralis* in the author's collection in 115 mm pots showing significant spotting of the leaves.

Aloe littoralis in flower

My young plants (Figure 3) have yet to flower and Janet did not observe flowering in habitat. Details of the flowers are therefore illustrated here with a previously published water colour painting (Fig. 4, reproduced from Prain, 1909). To complement this Van Wyk & Smith (2014) record that “The flowers are tubular, up to 30 mm (1¼ inches) long and vary from pink to red, often with a greyish waxy layer that gives them a silvery appearance. The open flowers become distinctly yellowish towards the mouth”. They noted further that “even young plants will produce flowers ...” so I may not have to wait too long to see these for myself on my own young plants.

For information other attractive water colour paintings are reproduced in Van der Merwe (1941), Jeppe (1969) and Bornman & Hardy (1971).

Close relatives of *Aloe littoralis*

Carter *et al.* (2011) record that “This species is closely related to *A. esculenta* and *A. kaokoensis*, which are smaller, usually stemless plants with white spots on the leaves, and which have more inflorescence branches and longer racemes with orange-red to yellowish flowers.” *Aloe littoralis* is also distinguished from the recently described *A. mocamedensis* which has a short stem only up to 60 cm tall, which usually branches forming groups of up to 6 stems, whilst its juvenile form has unspotted leaves and also remains distichous for several years (Van Jaarsveld, 2012).

Other details

In terms of its conservation status, *A. littoralis* is widely distributed and very abundant as outlined above and

hence is not threatened across its range.

Three occurrences of natural hybrids involving *A. littoralis* as one the parents have been recorded: *A. littoralis* × *A. marlothii* in Botswana (Reynolds, 1950); *A. littoralis* × *A. zebrina* near Luanda in Angola (Reynolds, 1966; this may possibly be what was described as *A. angolensis* (Baker, 1878; Glen & Hardy, 2000)) and *A. littoralis* × *A. greatheadii* in northern South Africa (Glen & Hardy, 2000).

Not unsurprisingly for a species with an exceptionally widespread natural distribution

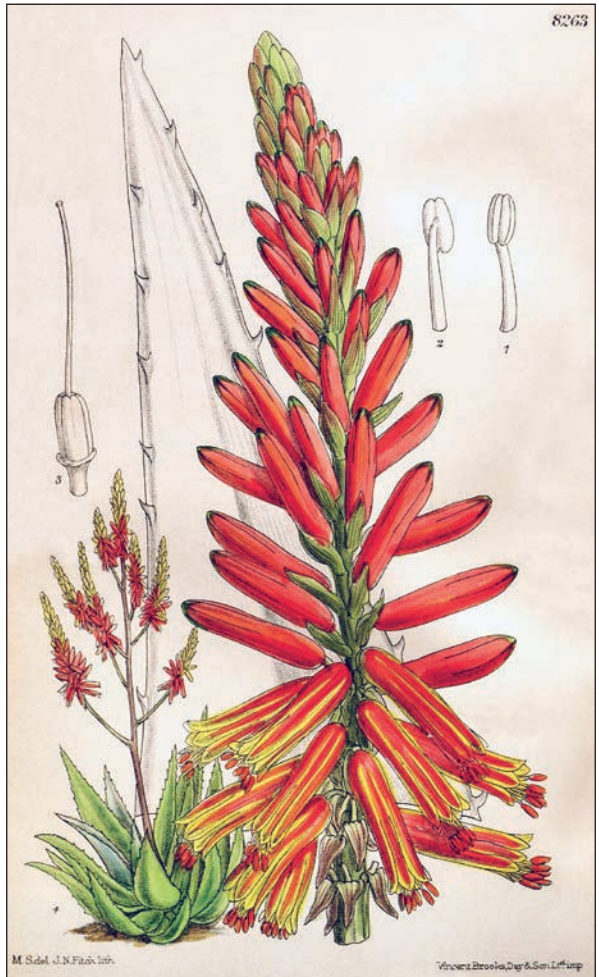


Fig. 4. *Aloe rubrolutea* (= *A. littoralis*) from Prain (1909).

across seven countries and many cultures, this species has acquired many common names, some not even African. Grace *et al.* (2011) list 47 such names. Of these “sea-side aloe” and “aloe of the shore” are my personal favourites, being literal translations of the Latin specific name. Many of the other names in Tamil, Hindi, Panjabi, Sanskrit, Nama, etc., do not appear to have obvious derivations.

Finally, *A. littoralis* deservedly appears as part of the Windhoek Coat of Arms since it is only one of two aloes growing around the capital city of Namibia (*A. zebrina* is the other species in this area of Namibia (Rothmann, 2004)). The Arms were officially granted on 2nd October 1966 with a stylized aloe that was changed on 15th September 1972 to a natural-looking aloe. The Arms show the typical ‘Windhoek aloe’ (*A. rubrolutea*, now *A. littoralis*). (Available for viewing at, for example, Heraldry of the World).

Acknowledgements

I’m most indebted to my colleague and friend Janet Haresnape for taking the time to photograph aloes during her stay in Namibia and for harvesting a very small sample of seeds. Tina Wardhaugh later raised a small number of seedlings from Janet’s seed for which I’m very grateful. Roy Mottram is thanked for providing scans and jpegs of relevant literature (Prain, 1909 & Van der Merwe, 1941).

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